# Miami-Dade County, Surfside Beach Renourishment Project

**U.S. Army Corps of Engineers**

**Jacksonville District**

**February 13, 2019**

US Army Corps of Engineers
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# Project Purpose



- coastal storm risk management
- beach erosion control
- hurricane surge protection

# Beach Renourishment Benefits



- protect infrastructure, the beach is the first line of defense against storm impacts and damage
- preserve the environment for wildlife
- support the economy (tourism)
- recreational value
- build coastal resiliency

# Overview of Federal Project

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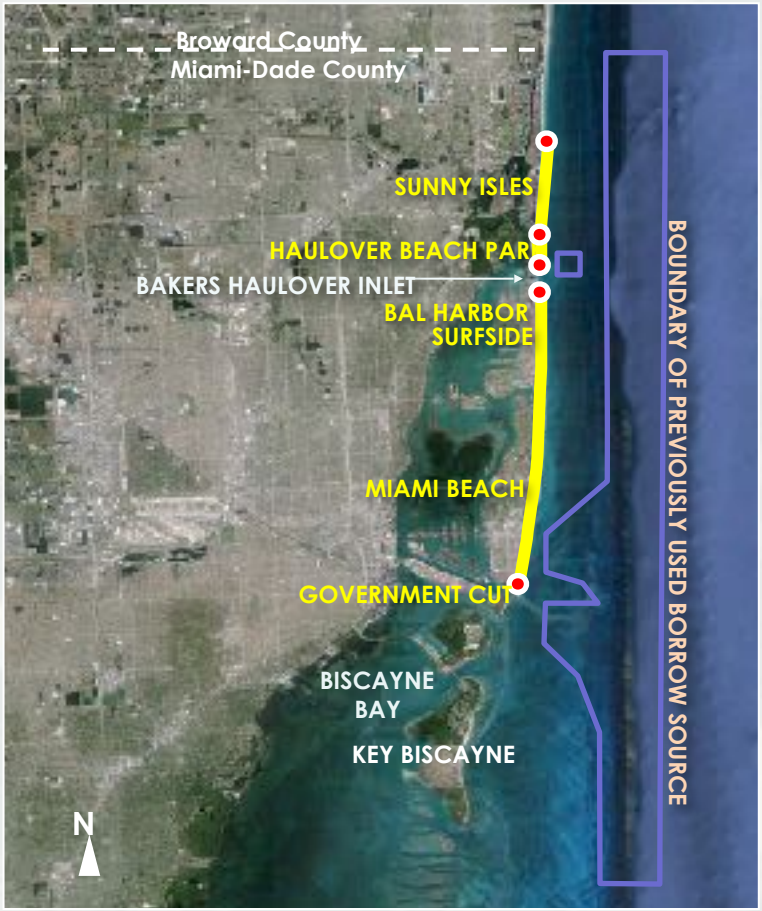


- Main Segment: 10.5 miles in length. Initial construction of this segment began in 1975.
- Sunny Isles Segment: 2.5 miles in length. The segment was initially constructed in 1988.

# Miami-Dade County Master Plan

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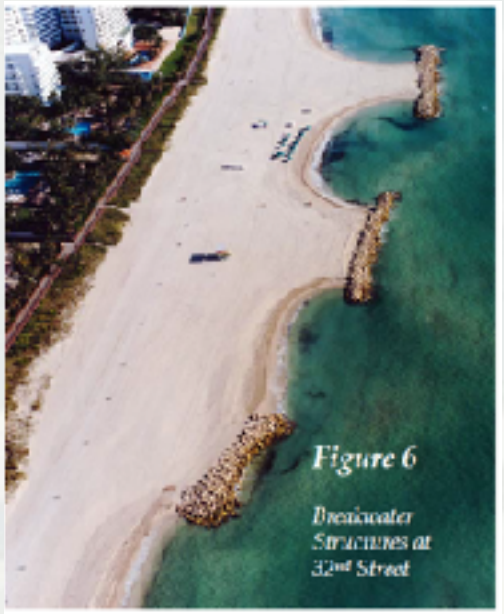
Comprehensive summary of the current status of the beach, and identifies needs and solutions for future management of the shoreline

## 7 Hotspots

1) North end of Sunny Isles
2) Bal Harbour
3) 63rd Street
4) 55th Street
5) 44th Street
6) 32nd Street
7) North of Government Cut




Recommendations for managing these hotspots range from no action, to structural solutions such as breakwaters and groins and beach nourishment

# Past Nourishments

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- See more pictures at; https://www.flickr.com/photos/jaxstrong/sets/72157672356006160

# Progress During Nourishment

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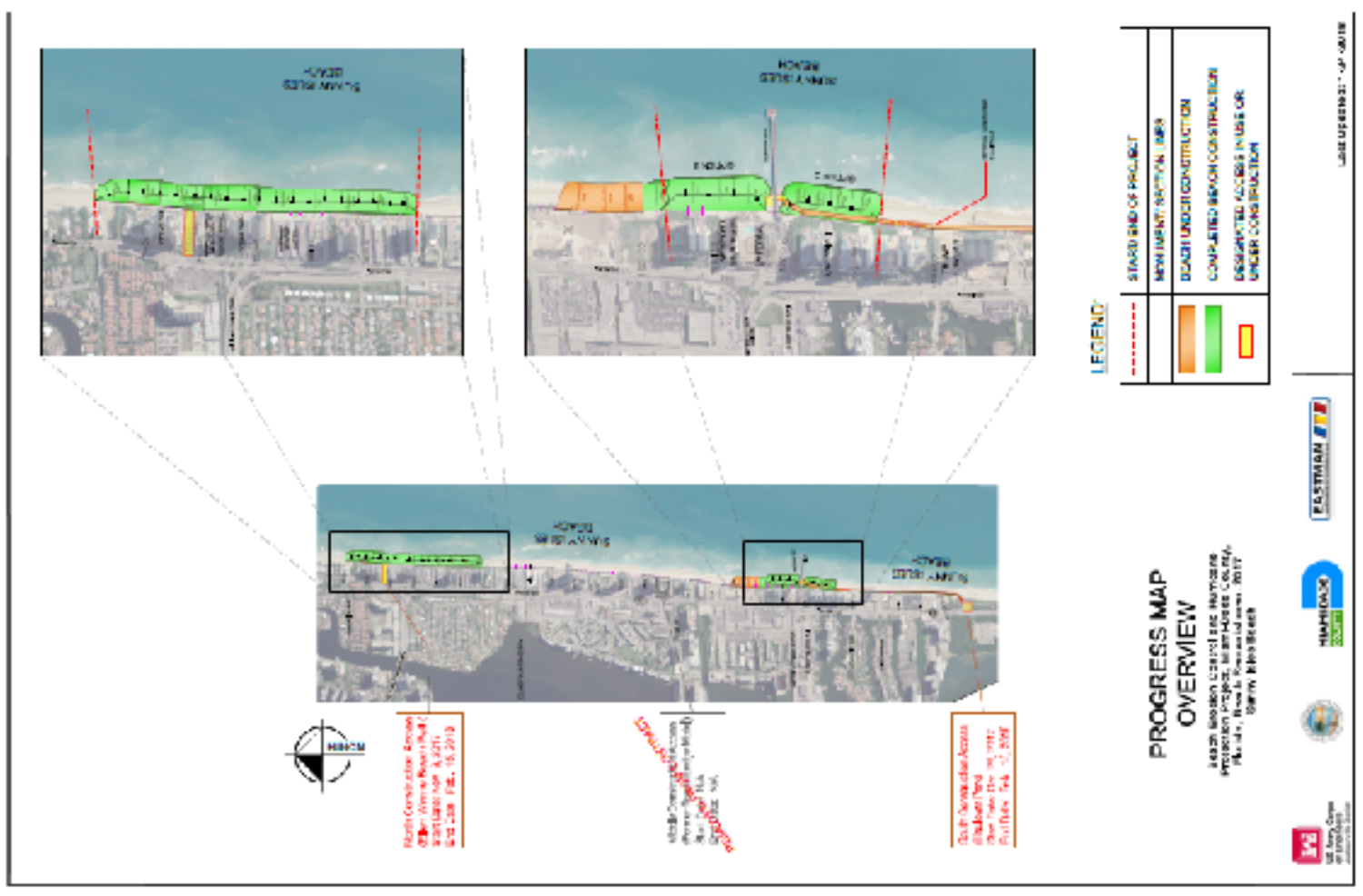

# Surfside Beach Project

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**Beach Fill:**

- 330,000 cubic yards of sand placed along the town limits scheduled to begin in June/July timeframe

# Work Progress



- Average 22 tons/truck
- (1 ton = 0.5 cy)

cy = cubic yard of sand

Potential Range of Production

1,200 cy per day
(100 trucks/day)
275 days

3,000 cy per day
(272 trucks/day)
110 days

# Work Progress

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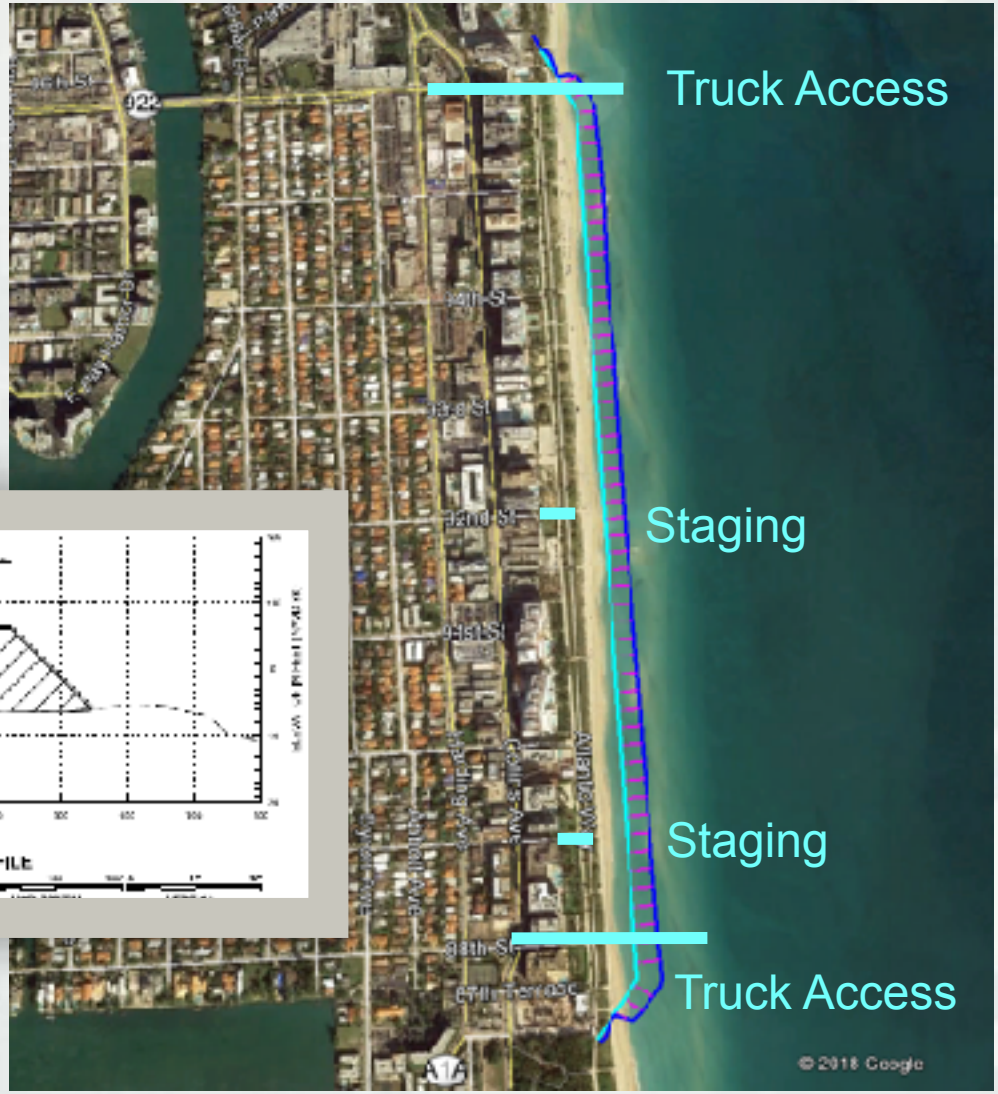
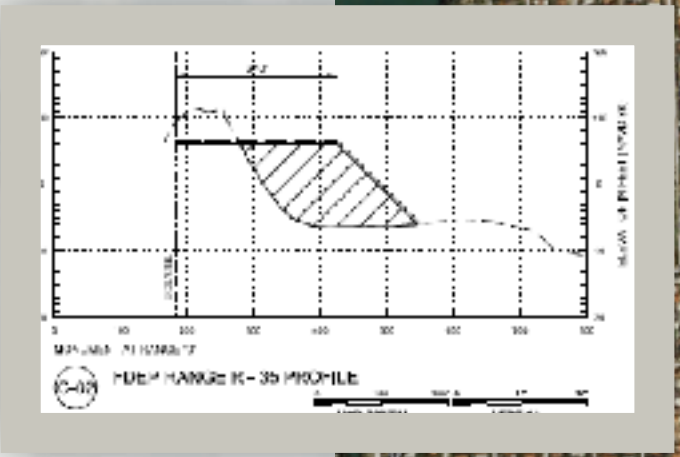
From just north of 96th street, to south of 88th Street.



**Active Construction:**

- Trucks in staging areas running

M-T: 7 a.m. to 7 p.m.

F: 7 a.m. to 5 p.m.

S: 9 a.m. to 5 p.m., and no work on Sundays.

- Trucks and equipment on beach same timeframes.
- Several holidays identified as No Work days.

# Work Progress

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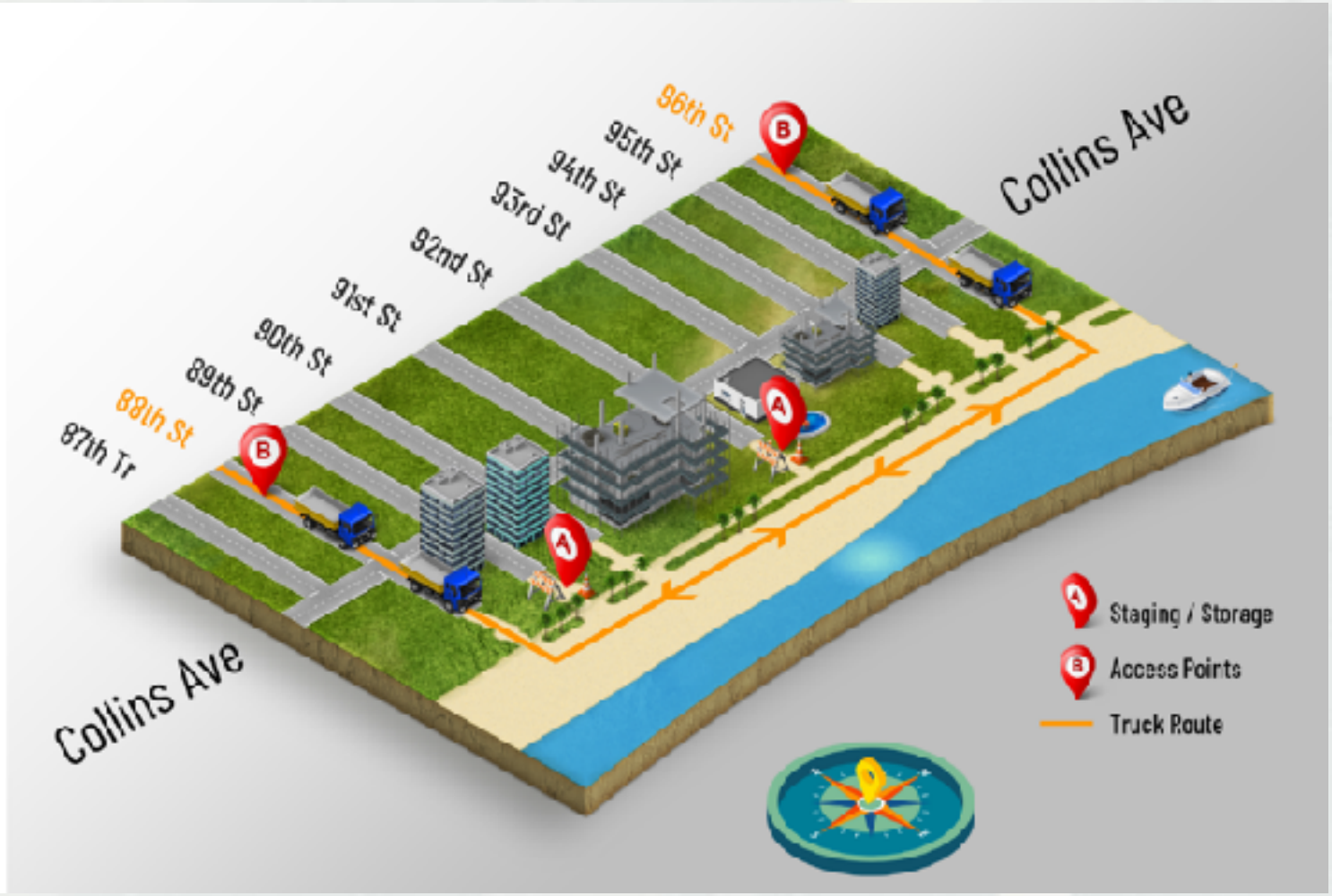

# Construction

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**Expect to see and hear heavy machinery including dump trucks, bulldozers, backhoes**

**Some areas of the beach and the parking lots will be fenced off for your protection; please steer clear of all construction zones**

# Surfside Beach Project

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# Protection of Wildlife



- Monitoring: daily of migratory shorebird and sea turtles, all clear required each morning (Miami-Dade County and Contractor)

- Nest Relocation: of sea turtle nests out of construction zone, as authorized by FWC.
- Equipment Storage: From March 1 through November 30, staging areas for construction equipment must be located off the beach to the maximum extent possible. Nighttime storage of construction equipment not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities.

- Beach Fill: material placed on the beach must be analogous to that which occurs naturally within the project location or vicinity in quartz to carbonate ratio, color, median grain size, and median sorting.

# Sand Quality

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Figure 51 - Comparison of Native Miami-Dade Beaches to Other Sand Sources (53rd Street Native; MC = M4-R105; SLC = SL10-T41; Lummus = Lummus Park; ACI = ACI mine; Ortona = Ortona mine; BH Ebb = Bal Harbor Ebb Shoal).

# Sand Quality



Florida Administrative Code 62B-41.007(2) (the Florida Sand Rule) requires that beach fill maintains the general character and functionality of the material occurring on the beach and in the adjacent dune and coastal system.

Such material shall be predominately of carbonate, quartz or similar material with a particle size distribution ranging between 0.062 mm and 4.76 mm, shall be similar in color and grain size distribution to the material in the existing coastal system at the disposal site and shall NOT contain:

- Greater than 5 percent, by weight, silt, clay or colloids passing the #230 sieve
- Greater than 5 percent, by weight, fine gravel retained on the #4 sieve
- Coarse gravel, cobbles or material retained on the 3/4 inch sieve in a percentage or size greater than found on the native beach
- Construction debris, toxic material or other foreign matter
- And shall not result in cementation of the beach

# Dade County Sand Specification



The specification for Dade County Beach fill material is more limiting than the Florida Sand Rule:

- The sand supply shall be naturally created
- The sand may be processed, but manufactured sand is now allowed. Sand produced from crushed rock is considered manufactured and is not allowed
- The sand must be composed of quartz and/or calcium carbonate with no more than 5 percent sand of other mineralogical composition
- No more than 60 percent of the sand (quartz or calcium carbonate) shall be whole or broken shell
- The Average Mean Grain Size must be greater than or equal to 0.30 mm and less than 0.55 mm
- The Standard Deviation values must range from 0.50 phi to 1.75 phi (moderately well sorted to poorly sorted)
- Silt content (passing No. 230 sieve) must be less than 5 percent
- 95 percent of the material must pass the #4 sieve (4.76 mm)
- 99 percent of the material must pass the 3/8 inch sieve (9.51 mm)
- 100 percent of the material must pass the 3/4 inch sieve (19.0 mm)
- Sand color shall be similar to the existing beach. Based on the Munsell Soil Color Chart, color must be within the range:

  HUE: 2.5 YR, 5 YR, 7.5 YR, 10 YR, 2.5 Y, 5 Y

  CHROMA: 1, 2, or 3

  VALUE: 6, 7, or 8

# What is the Cost for the Project?



- Range of magnitude $50 to $65/cubic yard
- Project is 100% funded by the Federal Government pursuant to the Bipartisan Budget Act (P.L. 115-123); “Supplemental”

# Other Supplemental Actions

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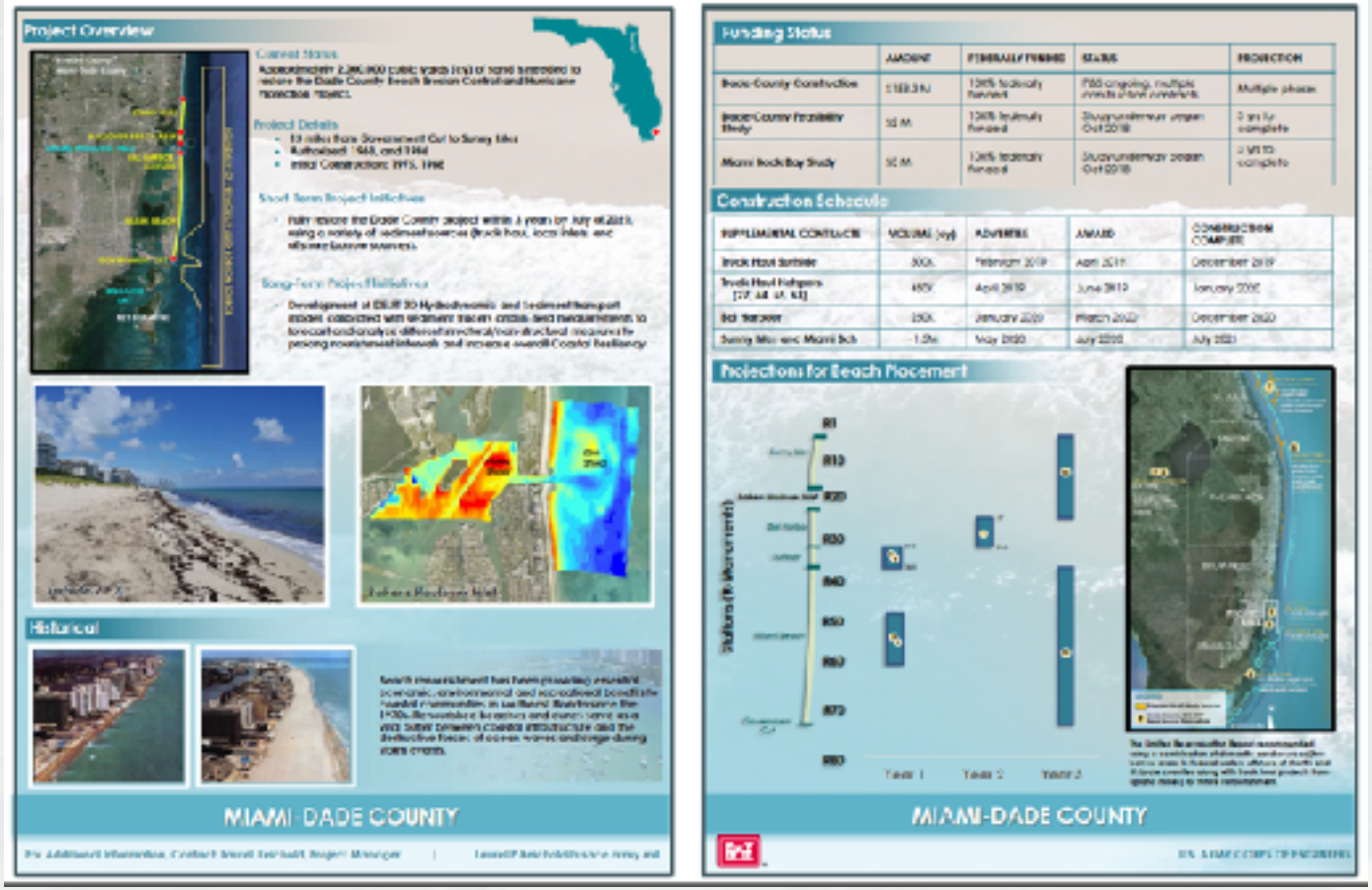
- $158.3M is the total allocation for Dade County funded by the Federal Government pursuant to the Bipartisan Budget Act (P.L. 115-123).



# Additional Information

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## Where can I get more information?

## Corps Website

http://www.saj.usace.army.mil/Surfside/

## Miami-Dade County Website

http://www.miamidade.gov/environment/beach-renourishment.asp

## Town of Surfside Website

https://townofsurfsidefl.gov/news-and-events/news-detail/2019/02/07/beach-renourishment---surfside-florida

# Social Media

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U.S. Army Corps of Engineers Facebook page: https://www.facebook.com/JacksonvilleDistrict/

@JaxStrong @MiamiDadeRER @MiamiDadeCounty

# Thank you!